



# **Winter Safety for Seniors**

**Patty Crooker, MPH CHEP**  
**Regional Public Health Preparedness Coordinator**

City of Nashua  
Division of Public Health & Community Services

# Outline

- Public Health Preparedness Overview
  - Region
  - Partners
  - PH Emergencies
  - Objectives
- Winter Weather Information
  - NH Weather Disasters
  - NH Annual Snowfall Statistics
  - Winter Weather Terminology
- Winter Weather Injuries
- Addressing Functional Needs

# Outline

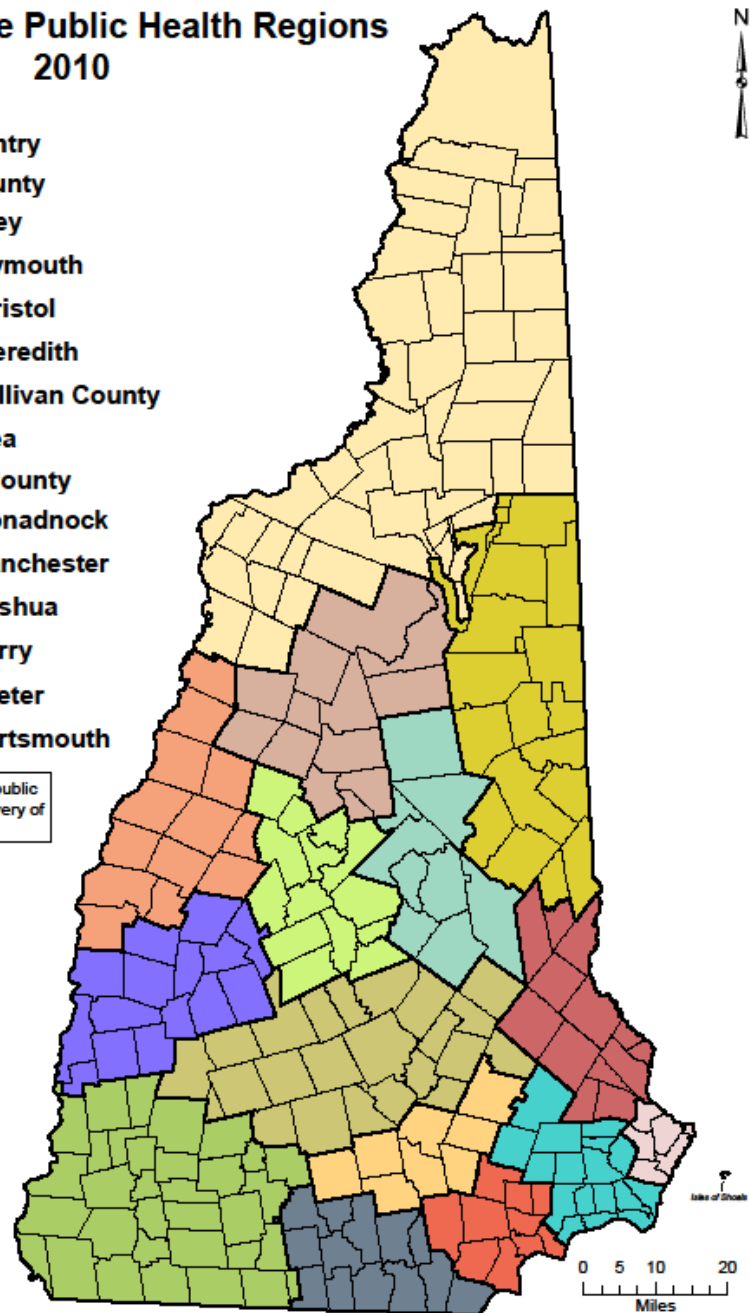
- What Should I do to Prepare for Winter Weather?
  - Get your Home Winter Ready
  - Get your Car Winter Ready
  - Make an Emergency Kit
  - Make a Car Safety Kit
  - Build a Support Network
  - Your Emergency Plan
  - Evacuation & Shelters
- Q&A
- Resources

# Public Health in NH

## New Hampshire Public Health Regions 2010

- North Country
- Carroll County
- Upper Valley
- Greater Plymouth
- Franklin/Bristol
- Laconia/Meredith
- Greater Sullivan County
- Capital Area
- Strafford County
- Greater Monadnock
- Greater Manchester
- Greater Nashua
- Greater Derry
- Greater Exeter
- Greater Portsmouth

These regions are used for public health planning and the delivery of select public health services



## Greater Nashua Public Health Region



# Regional Partners

- Elected Appointed Municipal Officials
- Health Officers/Emergency Management Directors
- Police/Fire/EMS
- Hospitals,
- Community Health Centers,
- Primary Care Providers,
- Home Care Providers
- School/District Officials
- Human/Social Services Providers
- Public Health Network
- Behavioral Health Providers
- State Agencies – HSEM, DHHS, DOS

# What is a Public Health Emergency?

- Any natural or man-made disaster/event that effects the health of a community
  - Communicable Disease Outbreak – H1N1
  - Biological Agent - Anthrax
  - Nuclear/Radiological
  - Natural Disaster
    - Hurricane
    - Flood
    - Ice Storm







# Preparedness Objectives

- ✓ Develop plans for emergency response, mitigation, and recovery.
- ✓ Identify local resources and assets.
- ✓ Encourage individual/business preparedness.
- ✓ Assist communities with planning activities, including exercises/drills
- ✓ Response activities

# Winter can be Beautiful!



# But it can also be dangerous...



# What is a Disaster?

**“An occurrence that has resulted in property damage, deaths, and/or injuries to a community.”**

**(FEMA, 1990)**

# Major Disaster

**Any natural catastrophe...** or, regardless of cause, any fire, flood, or explosion in any part of the United States which, in the determination of the President, **causes damage of sufficient severity and magnitude to warrant major disaster assistance**... to supplement the efforts and available resources of states, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby.”

(Strafford Act)



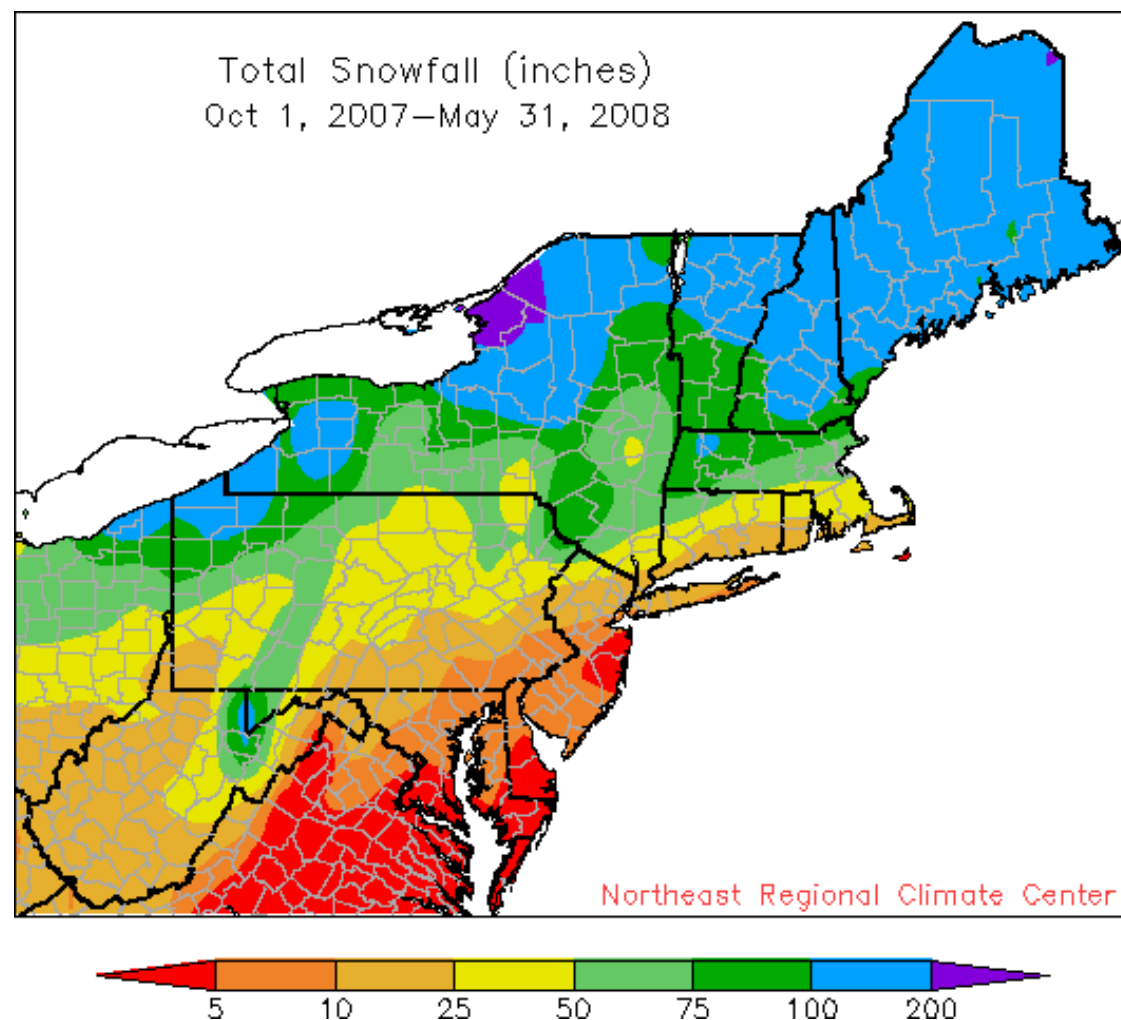
# Major Disaster Declarations in NH 2000-2011

- Tropical Storm Irene – 09/3/11
- Severe Storms and Flooding – 07/22/11, 05/12/10, 10/03/08, 09/5/08, 04/27/07, 05/25/06, 10/26/05, 09/12/03
- Severe Winter Storm – 03/29/10, 01/02/09, 12/13/08
- Severe Storms, Tornado and Flooding – 08/11/08
- Hurricane Katrina Evacuation – 09/19/05
- Snow – 04/28/05, 03/30/05, 01/15/04
- Snowstorm – 03/11/03, 03/28/01

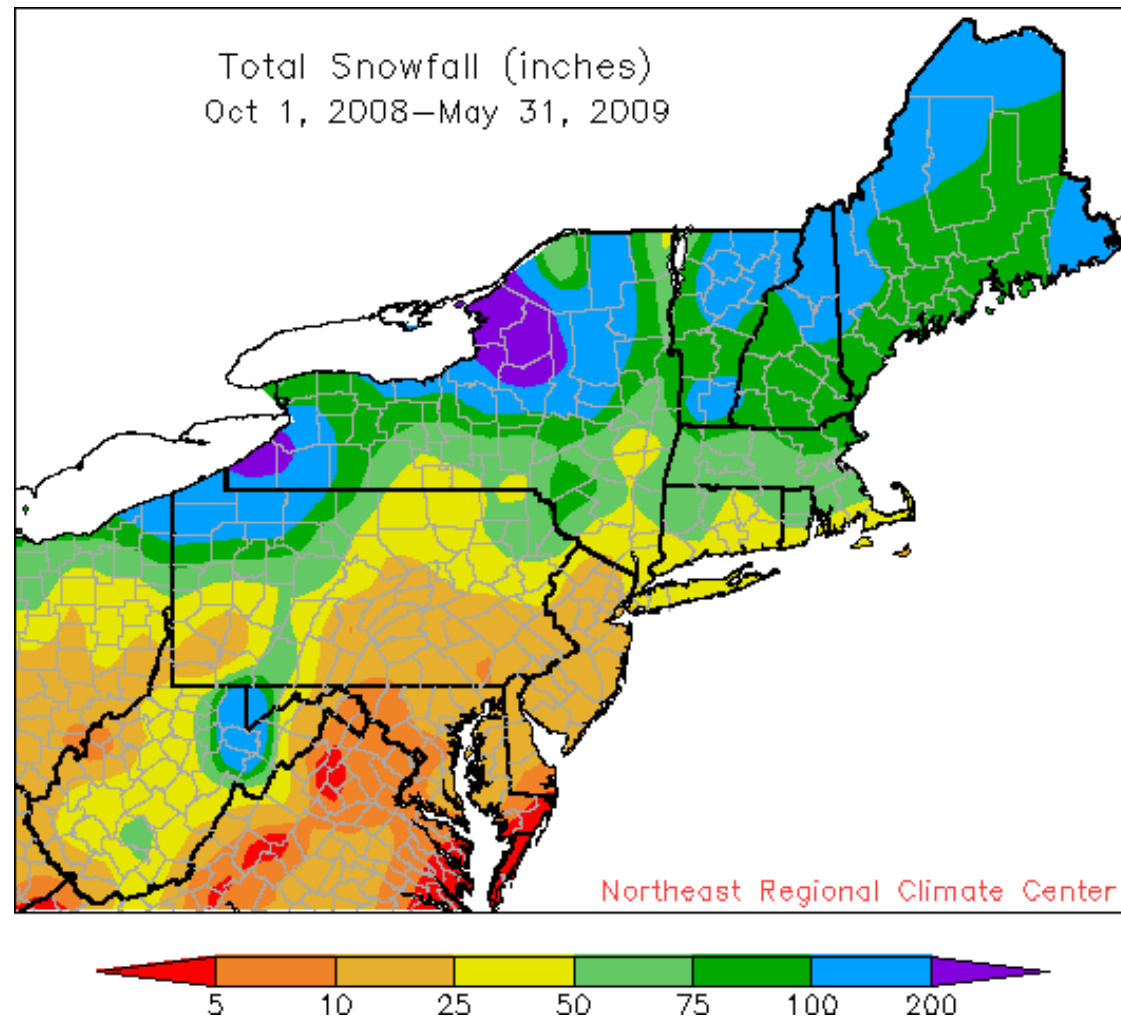
<http://www.fema.gov/femanews/disastersearch.doc>



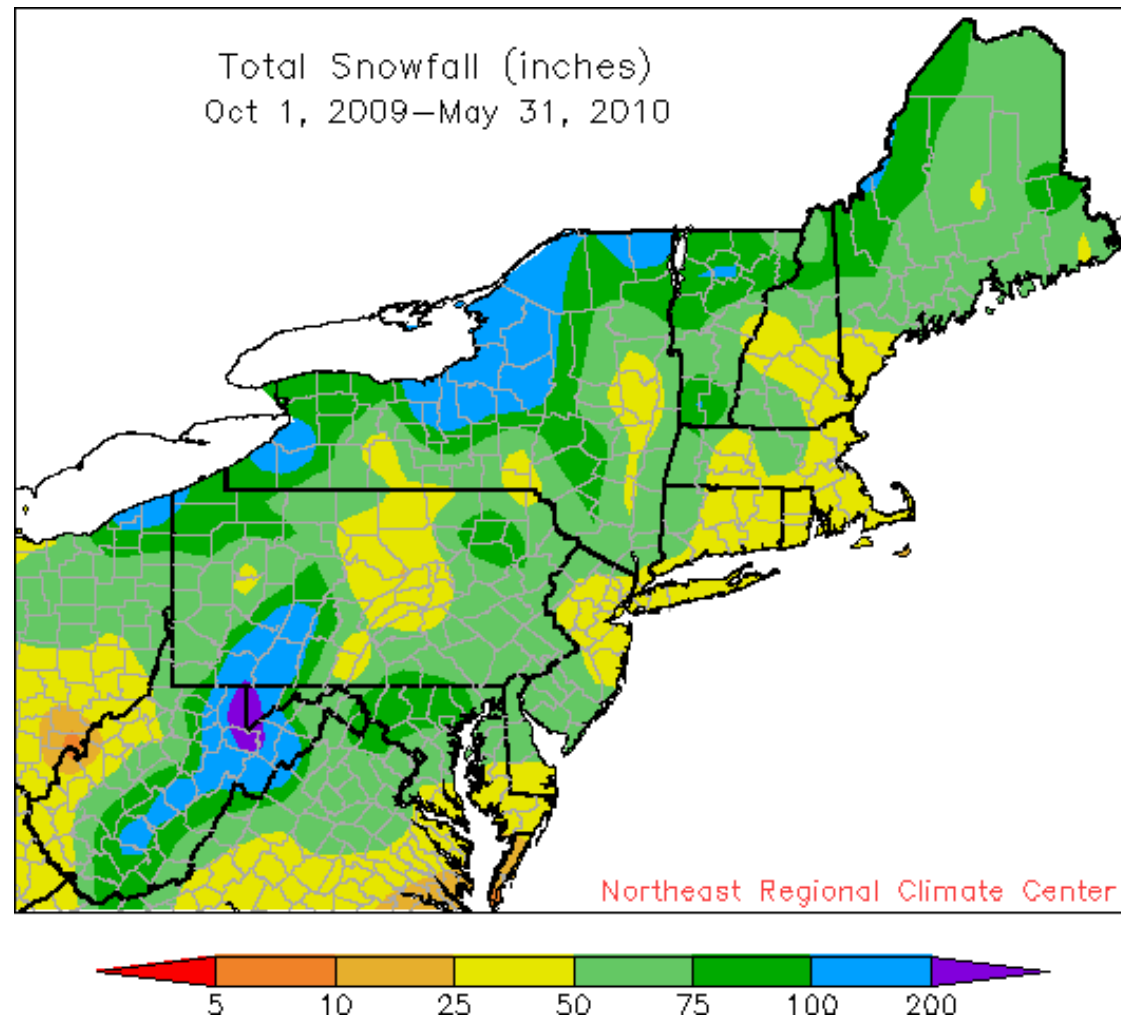
# Winter Weather in NH



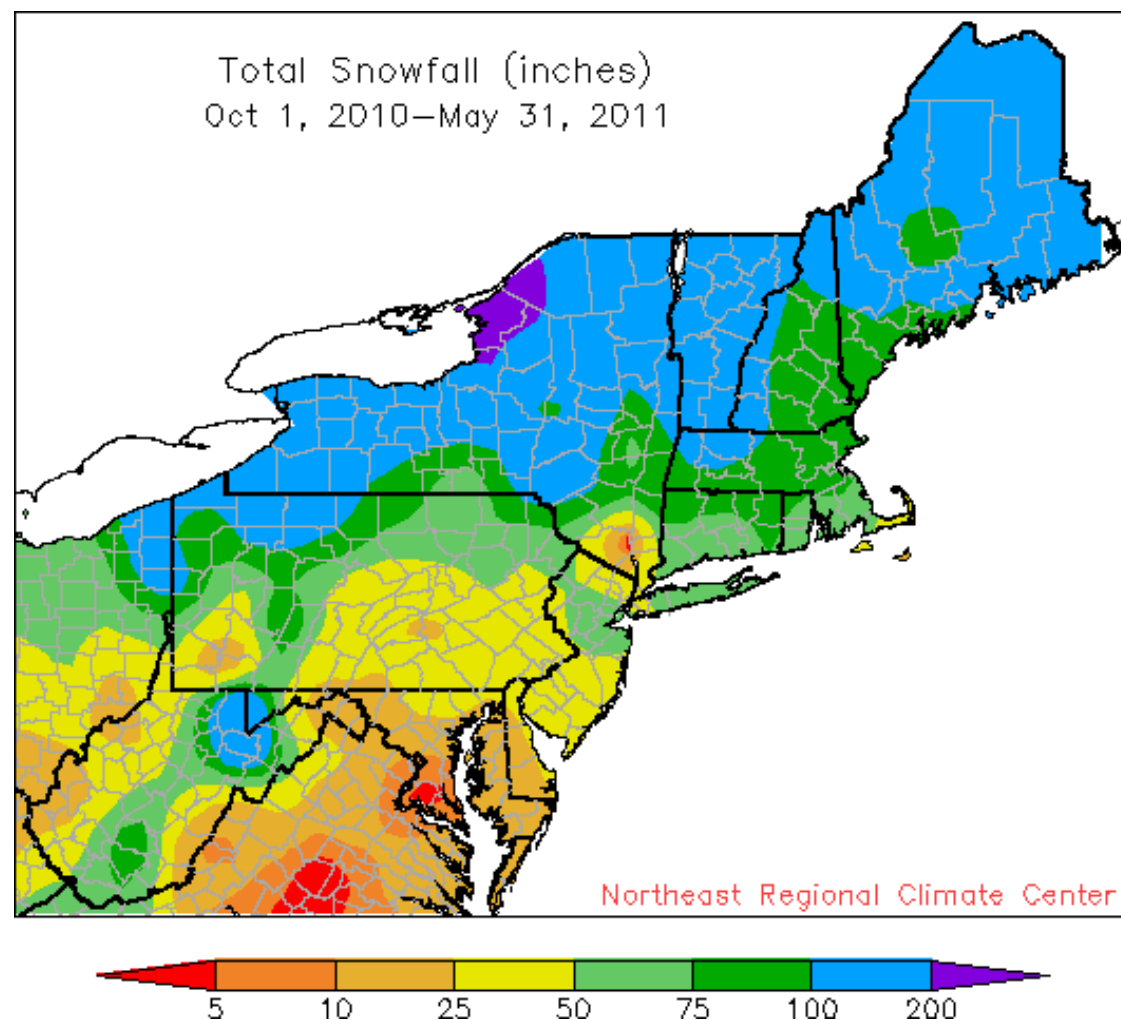
# Winter Weather in NH



# Winter Weather in NH



# Winter Weather in NH



# Winter Weather Terms

- **OUTLOOK:** Winter storm conditions are possible in the next 2-5 days. Stay tuned to local media for updates.
- **WATCH:** Winter storm conditions are possible within the next 36-48 hours. Prepare now!
- **WARNING:** Life-threatening severe winter conditions have begun or will begin within 24 hours. Act now!
- **ADVISORY:** Winter weather conditions are expected to cause significant inconveniences and may be hazardous. If you are cautious, these situations should not be life threatening.

# Common Weather Emergencies

## Type

- Flooding
- Ice/Snow Storms
- Wind Storms

## Effect

- Power outages
- Transportation disruption
- Injuries
- Loss of communication networks



# Injuries Due To Ice and Snow

- About 70% result from vehicle accidents
- About 25% occur in people caught out in a storm
- Most happen to males over 40 years old

National Weather Service, 2008

# Injuries Related to Cold Exposure

- 50% happen to people over 60 years old
- More than 75% happen to males
- About 20% occur in the home

Ready.gov

# Heat and Cold Exposure

- According to the 2010 Nashua Health Survey:
  - 49% (16,728) of households have an alternate heating source
  - 93% have working air conditioning. Power outages also increase the risk of carbon monoxide exposure from improper use of generators

# State of NH Emergency Department Visits for Cold and Heat Exposures

Year	Cold-related exposures including frostbite and hypothermia	Heat-related exposures including heat cramps, exhaustion, stroke
2003	133	111
2004	141	94
2005	117	164
2006	70	159
2007	114	127
Source: NH DHHS		

# Wind Chill

- How cold people and animals feel when outside.
- Based on the rate of heat loss from exposed skin caused by wind and cold.
- As the wind increases, it draws heat from the body, driving down skin temperature and eventually the internal body temperature. Therefore, the wind makes it FEEL much colder.

# Wind Chill

- If the temperature is 0 degrees Fahrenheit and the wind is blowing at 15 mph, the wind chill is -19 degrees Fahrenheit. At this wind chill temperature, exposed skin can freeze in 30 minutes.





# NWS Windchill Chart



		Temperature (°F)																		
		Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Wind (mph)	5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63	
	10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72	
	15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77	
	20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81	
	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84	
	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87	
	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89	
	40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91	
	45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93	
	50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95	
	55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97	
	60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98	

Frostbite Times



30 minutes



10 minutes



5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

# What is Frostbite?

- Frostbite is an injury to the body caused by **freezing body tissue**.
- The most susceptible parts of the body are the **extremities** such as fingers, toes, ear lobes, or the tip of the nose
- Symptoms include a **loss of feeling** in the extremity and a **white or pale appearance**.
- Medical attention is needed immediately for frostbite.
- The area should be SLOWLY re-warmed.

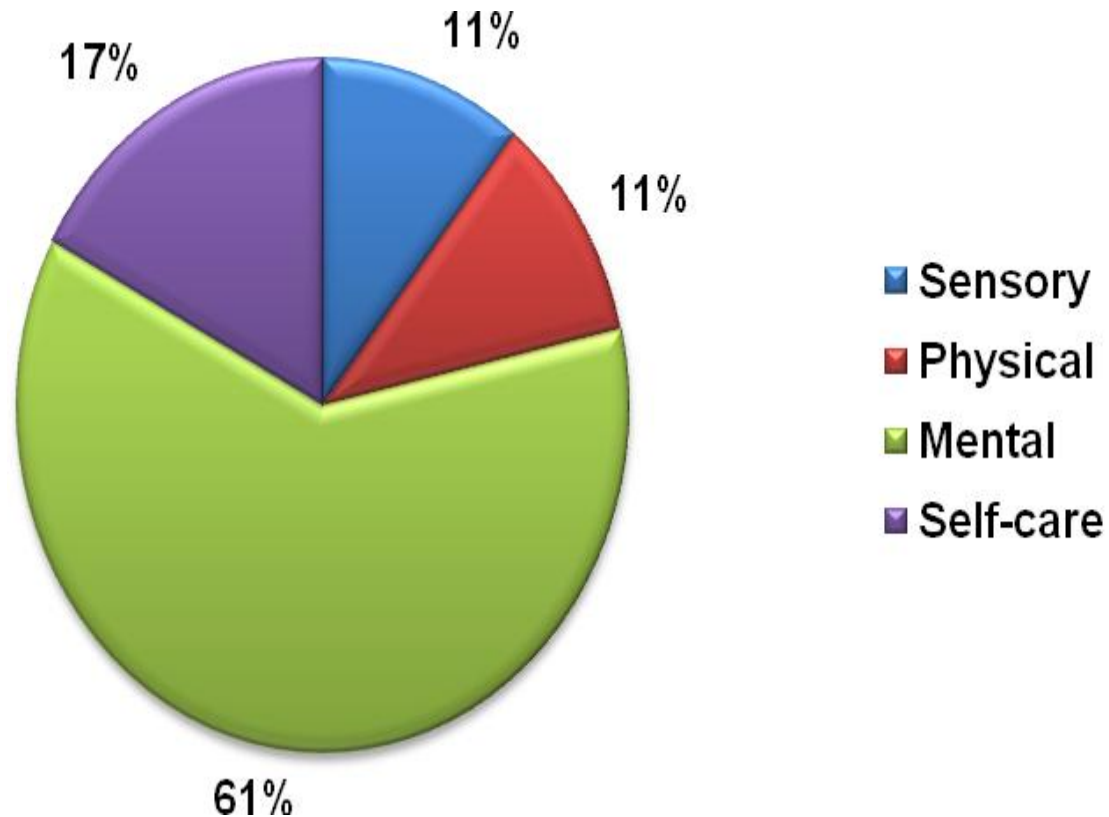
# What is Hypothermia?

- Hypothermia is abnormally low body temperature (below 95°F).
- Warning signs include uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness, and apparent exhaustion.
- **Medical attention is needed immediately.**
- If it is not available, begin warming the body SLOWLY.

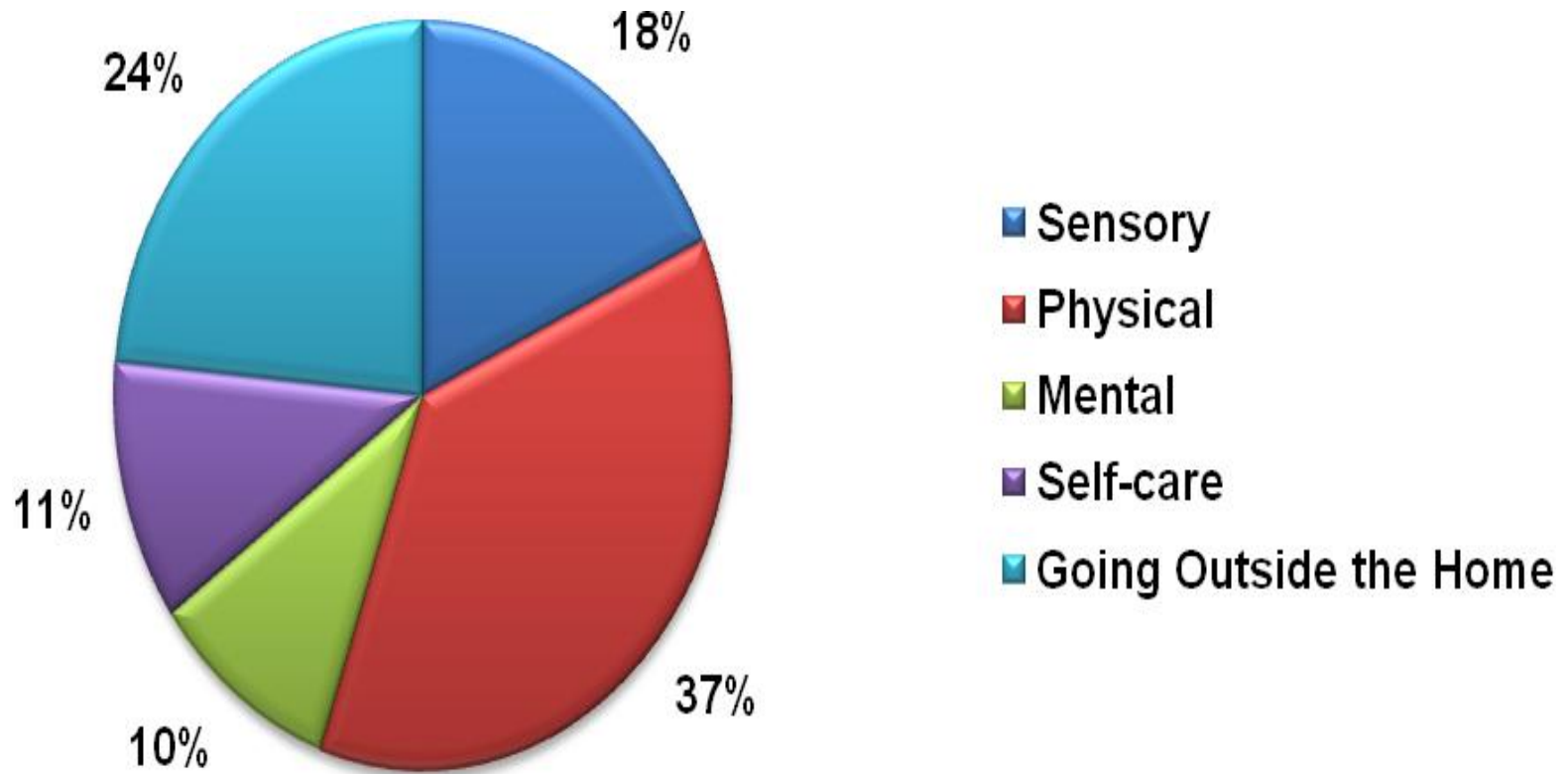
# Functional Needs

- Functional Needs populations can include individuals who require self-care support, including:
  - Mobility assistance
  - Translation services
  - Hearing/visual assistance
  - Access to medical support (i.e. durable medical equipment)

# Nashua's Children 5-15 years of Age by Type of Disability

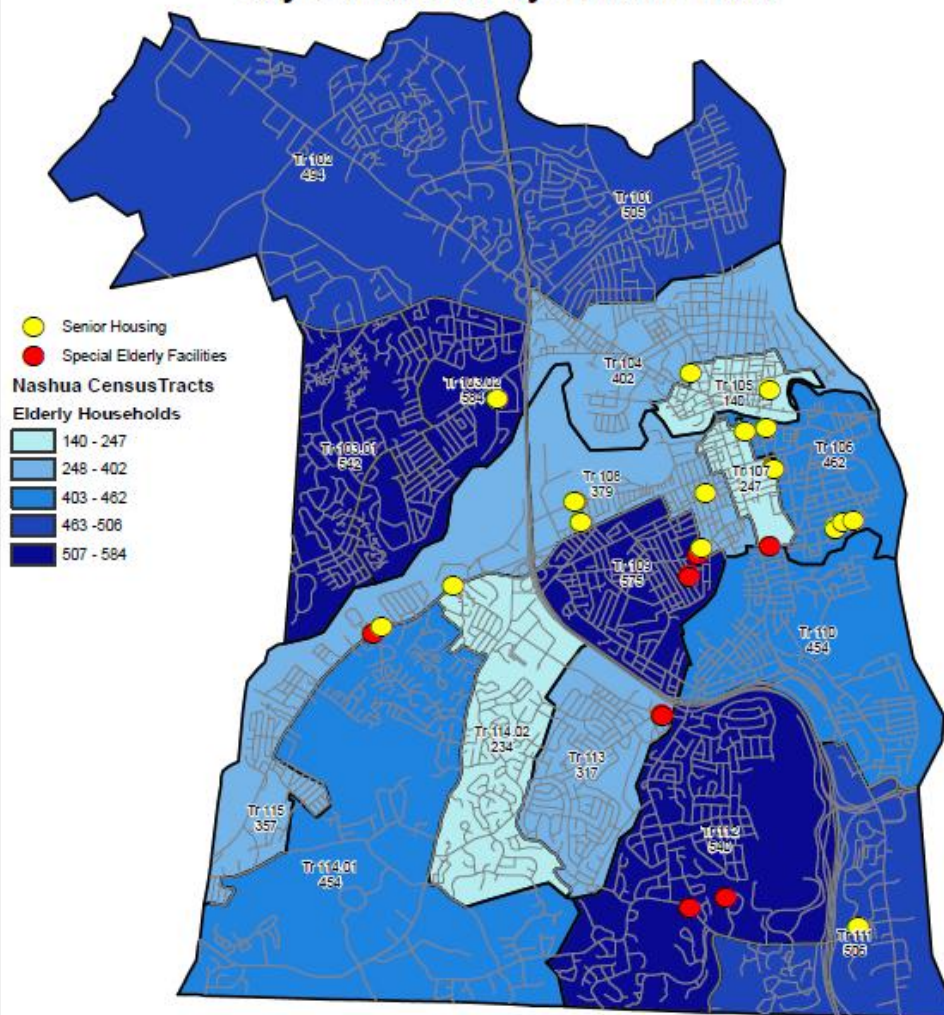


## Nashua's Adults 65 years and Over by Type of Disability





## Nashua's Households with One or More People 65yrs and Over by Census Tract



Special Elderly Facilities include long-term care and assisted living facilities. Senior Housing is defined as housing for adults over 55 years of age.

Source: American Community Survey, 2005-2009



# What Should I do to Prepare for Winter Weather?



# Get your home Winter Ready

- Make sure your home is well insulated and that you have weather stripping around your doors and windowsills to keep the warm air inside.
- Insulate pipes
- Learn how to shut off water valves (in case a pipe bursts).
- Keep fire extinguishers on hand, and make sure everyone in your house knows how to use them.
- Hire a contractor to check the structural stability of the roof

# Get your home Winter Ready

- Properly vent fireplaces, wood stoves and other combustion heaters
- Never use a charcoal or gas grill indoors—the fumes are deadly.
- Never leave lit candles unattended.
- Keep as much heat as possible inside your home.
- Leave all water taps slightly open so they drip continuously.
- Eat well-balanced meals to help you stay warmer.

# Get your Car Winter Ready

## **MAINTENANCE**

- Antifreeze levels
- Battery and ignition system
- Brakes
- Exhaust system
- Fuel and air filters
- Heater and defroster equipment
- Lights and flashing hazard lights
- Oil
- Thermostat
- Tires - make sure the tires have adequate tread.
- Windshield wiper

# Make a Kit

## Recommended Items to Include in a Basic Emergency Supply Kit:

- Water, one gallon of water per person per day for at least three days, for drinking and sanitation
- Food, at least a three-day supply of non-perishable food
- Battery-powered or hand crank radio and a NOAA Weather Radio with tone alert and extra batteries for both
- Flashlight and extra batteries

# Make a Kit (cont'd)

- First aid kit
- Whistle to signal for help
- Dust mask, to help filter contaminated air and plastic sheeting and duct tape to shelter-in-place
- Moist towelettes, garbage bags and plastic ties for personal sanitation
- Wrench or pliers to turn off utilities
- Can opener for food (if kit contains canned food)
- Local maps
- Cell phone with chargers

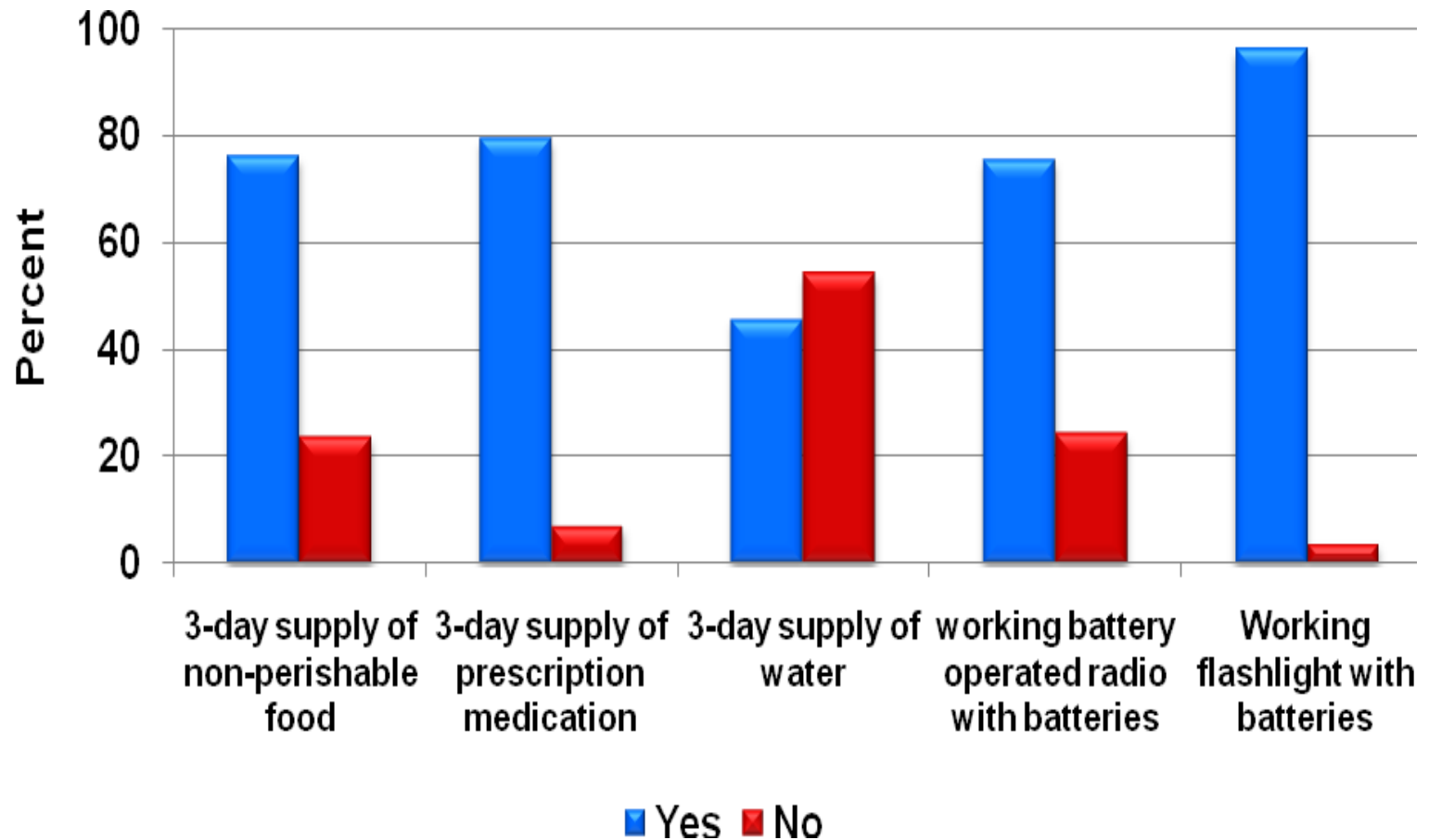


## According to BRFSS

Of all Nashua residents:

- 3.9% are well prepared to handle a large-scale disaster,
- 59.9% are somewhat prepared and
- 26.2% are not prepared at all.

## At Home Emergency Supplies for Nashua Residents



What would be your main method or way of getting information from authorities in a large-scale disaster or emergency?

<b>Weighted Frequencies</b>	<b>Estimated number of housing units</b>	<b>Percentage (n)</b>
<b>Television</b>	17,876	52% (109)
<b>Radio</b>	6,888	20% (42)
<b>Internet</b>	6,192	18% (37)
<b>Other</b>	3,116	10% (19)
<i>Source: 2010 Nashua Health Survey</i>		

# Get your Car Winter Ready – Car Safety Kit

- Bottled water
- Food (granola/energy bars)
- First aid kit
- Emergency distress flag
- Flashlight & extra batteries
- Flares/light sticks

# Get your Car Winter Ready – Car Safety Kit

- Blanket or sleeping bag
- Emergency reflective blanket
- Jumper cables
- Tire jack and spare tire
- Fix-a-flat
- Shovel
- Maps

# Build a Support Network

**It is important to plan now to make sure you can provide for your functional needs to be met.**

- Talk to family, friends and others who are part of your personal support network.
- Make sure everyone knows how you plan to evacuate your home or workplace and where you will go in case of a disaster.

# Build a Support Network

- Make sure that someone in your network has an extra key to your home and knows where you keep your emergency supplies.
- Teach those who will help you how to use any lifesaving equipment & administer medicine in case of an emergency.
- Practice your plan



# Your Emergency Plan – Consider This...

- If you use in-home services (Meals-on-Wheels, Visiting Nurse Service, home health aide, case management or other support services) work with them to make sure that your plans meet your needs.
  - What are their agency's emergency plans? What support can they offer you during an emergency? Will they still be able to provide services during an emergency?
  - How will you keep in touch with them during and after an emergency?

# Your Emergency Plan – Consider This...

- If you receive home delivery of medical supplies, ask the supplier if they will continue delivery during an emergency. If not, can they offer other local alternatives?

# Your Emergency Plan – Consider This...

- Plan in advance for shelter alternatives that will work for you and your pets:
  - Do you have family/friends nearby who you could be stay with?

# Guide to Emergency Shelters

- Co-located Shelter:
  - General Population Shelter
  - Supportive Care Shelter
  - Pet Shelter
- Most people are best served in a general population shelter along with family, friends, and neighbors

# Evacuation

- When residents were asked if they would evacuate if a mandatory evacuation was issued by local officials, or **94%** (32,104 households) said they would evacuate

# Evacuation

- Residents reported that the main concerns they faced when considering evacuation include:
  - leaving property behind
  - traffic jams
  - leaving pets behind

(Nashua DPHCS CHA, 2010)

If you had to evacuate from your home,  
where would you go?

	Estimated number of housing units	Percentage (n)
Relative/Friends House	21,608	63% (131)
Hotel	4,264	13% (26)
Emergency Shelter	3,772	11% (23)
Other	1,328	10% (27)

Source: NH DHHS

# I'm Going to a Shelter – My Shelter Go Kit

- Personal needs such as eyeglasses, hearing aids and hearing aid batteries, wheelchair batteries, and oxygen.
- If possible, extra medicine, oxygen, insulin, catheters, or other medical supplies you use regularly
- A list of family and friends that you may need to contact in an emergency



# I'm Going to a Shelter – My Shelter Go Kit

- Copies of medical information:
  - Prescriptions
  - Doctors orders
  - Medical insurance/Medicare/Medicaid cards
  - Style/serial numbers of support devices you use
  - List of your allergies
  - Written descriptions of your disability and support needs

# Emergency Shelters & Pets

- Not all emergency shelters allow pets
- Some shelters **ONLY** allow service animals
- If a shelter allows pets, remember to bring:
  - Pet carrier
  - Pet food
  - Anything your pet needs – medication, toys, litter, treats

**Call 211 or local emergency management to find out where shelters are being set up in your area and if they allow pets.**

# Questions & Comments



# Resources

- **City of Nashua, NH Community Health Assessment 2010:** [www.NashuaNH.gov/CityGovernment/Departments/PublicHealthCommunityServices](http://www.NashuaNH.gov/CityGovernment/Departments/PublicHealthCommunityServices)
- **Federal Emergency Management Agency (FEMA):** [www.FEMA.gov](http://www.FEMA.gov)
- **National Weather Service (NWS):** [www.NWS.NOAA.gov](http://www.NWS.NOAA.gov)
- **Northeast Regional Climate Center (NRCC):** [www.NRCC.cornell.edu](http://www.NRCC.cornell.edu)
- **Ready.Gov:** [www.Ready.Gov](http://www.Ready.Gov)
- **ReadyNH:** [www.ReadyNH.nh.gov](http://www.ReadyNH.nh.gov)
- **Red Cross:** [www.RedCross.org](http://www.RedCross.org)

# Contact Information:

**Patty Crooker**

Public Health Preparedness Coordinator -

Greater Nashua PH Region

Nashua Division of Public Health & Community Services

18 Mulberry Street

Nashua NH 03060

Phone: 603-589-4507

Email: [CrookerP@NashuaNH.gov](mailto:CrookerP@NashuaNH.gov)